Supplemental 4

Methodology Used to Project Recreational Catches for 2007-2008

I. Background

The recreational catch model incorporates a number of parameters and assumptions, all of which are either risk-neutral or risk-adverse. The basic analytical approach is the same as that used for 2005/06, with new 2004-05 data from the CRFS program to serve as a baseline. Model output predicts expected catch under any combination of season and depth fishing restrictions by region.

Management Region Definitions:

North Region:	North of 40˚10' N lat to CA/OR border
North-Central Region:	South of 40˚10' N lat to 37˚11' N lat (Pigeon Pt.)
South-Central Monterey Region:	South of 37˚11' N lat (Pigeon Pt.) to 36˚ N lat (Lopez Pt.)
South-Central Morro Bay Region:	South of 36˚ N lat (Lopez Pt.) to 34˚27' N lat (Pt. Conception)
South Region:	South of 34˚27' N lat (Pt. Conception) to CA/Mexico Border

II. CDFG/California Recreational Groundfish Model Assumptions

- Effort Shift Inshore: The model includes a 27.6% increase in expected landings when fishing is restricted to less than 30 fm and a 39.3% increase in expected landings when fishing is restricted to less than 20 fm. The increase, or effort shift, is to account for increased effort in a smaller fishing area.

- Discard Mortality:
  1) Canary, Cowcod, and Yelloweye are non-retention species which have high mortality rates when caught and released. All non-retention species are assumed dead in expected landings (100% mortality).
  2) CA Scorpionfish hooking mortality rate is assumed to be 5%. This rate is applied to expected landings of CA Scorpionfish when fishing is allowed for species which associate with CA scorpionfish, but fishing for CA Scorpionfish is not allowed.

III. Inputs and Key Parameters for the Model

- Base Year Catch: Caught and retained (CRFS "A" catch) plus filleted/caught and released dead (CRFS "B1" catch) in WEIGHT of fish. Assumed to be estimates for an unrestricted fishing year with no months closed and no depths closed. For 2004 and 2005, a back calculation method was used to add a catch estimate for what the catch would have been (based on percent caught in two-month periods and depths in prior years), if all months and all depths had been open.

- Historical Catch Through Time: Estimates of historical percent catch by two-month period were calculated for each region based on RecFIN MRFSS data (weight of A+B1) from 1993-1999, which was a time period when seasons and depths were unconstrained. Proxies were considered on a species by species basis for regions where there was a lack of catch data for that area.

- Historical Catch By Depth: Estimates of percent catch by depth were calculated for each region based on RecFIN MRFSS depth sample data (numbers caught A+B1 for CPFV and A+B1+B2 for PR) from 1999-2000, which was a time period when depths were unconstrained. Proxies were considered on a species by species basis for regions where there was a lack of catch data for that area.